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ABSTRACT

Research has shown that race, social class, and gender influence teacher expectations of student performance. To investigate teacher expectations for the academic performance and future occupational status of white and Asian elementary school children, and the teacher attributions for their performance, 25 white elementary school teachers (23 female, 2 male), with a mean of 6 years of teaching experience, completed Budner's Scale of Tolerance-Intolerance of Ambiguity, and the Paragraph Completion Test. Teachers then estimated students' projected grades, occupations, and reasons for success/failure on six record cards containing a fictitious student's cumulative grades, background information, and his/her photograph. An analysis of the results showed that higher grades and occupational status were expected for middle class than lower class students, and higher grades were expected for Asian students than white students. Girls were expected to receive higher grades than boys. Asian males were expected to attain higher occupational status than white boys, while white girls were expected to attain higher occupational status than Asian girls. High authoritarian teachers utilized student background to form lower expectations for out-group than for in-group students. Teachers held positive stereotypes of Asian males, believing them to have an internal locus of control and strong family and peer support and influence. (BL)

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Teacher Cognitive Style, Expectations, and Attributions for Student Performance

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This paper was presented in a symposium entitled "Adult Cognitive Functioning and the Expectancy Phenomenon" (J. Straussner, Chair) presented at the meeting of the American Psychological Association, Anaheim, California, 1983.

Two of the most salient characteristics of students are their race and social class. Baron, Tom and Cooper (in press), in a review of past research, have found that in general, teachers hold higher expectations for middle class than lower class students. They have also found that higher expectations are generally held for white than black or other minority students. In addition, Good and Findley (in press) have found that student gender often affects teacher expectations in interaction with other variables such as subject matter and student background variables.

Only one study has compared teacher expectations for Asian and white students. Wong (1980) found that practicing teachers held significantly higher expectations for their Asian than white students, and that this effect was stronger at secondary than primary grade levels.

The Present Study

The primary focus of this study, then, was to compare the expectations teachers hold for the academic performance and future occupational status of white and Asian elementary school children, as well as the attributions made by teachers for the students' success or failure in academic performance. In this study the race of the students was the manipulated variable making it, as far as we know, the first experimental test of the white versus Asian comparison. It was predicted that teachers would expect Asian children to get higher grades and obtain jobs of higher occupational prestige than whites. These predictions are based on Wong's (1980) results, as well as on past research indicating that Asians are stereotyped as being more industrious, studious, conforming, and achievement-oriented than whites (Katz and Braly, 1933; Karlins, Coffman, and Walters, 1969; Sue and Kirk, 1972).

It was also predicted, based on past research, that higher expectations would be held for middle than lower class children. No overall prediction

was made for gender differences.

Teacher Authoritarianism. First of all, regarding personality factors, Adorno and others (1950) postulated several cognitive elements underlying the authoritarian personality. These elements included ethnocentrism, anti-intraception, concern for status, rigid cognitive style, and intolerance of ambiguity. Because of criticism regarding the measure of authoritarianism as a global trait (see Christie and Jahoda, 1954; or Kirscht and Dillehay, 1967) researchers usually develop measures of its constituent elements. In the present study authoritarianism was assessed by measuring teachers' (a) intolerance of ambiguity and (b) cognitive complexity.

Budner (1962) defined intolerance of ambiguity as "the tendency to perceive (i.e. interpret) ambiguous situations as undesirable" (p. 29). Allport (1954) maintained that intolerance of ambiguity is manifested through a need for concreteness and definiteness. Persons who are intolerant of ambiguity would be more reliant on the past, and more uncomfortable with unclear or unfamiliar situations. Frenkel-Brunswik (1949) held that people intolerant of ambiguity value a clear perception more than a correct one.

With regard to cognitive complexity, persons who are low in cognitive complexity attempt to reduce everything to a few simple components (Honess, 1976). They perceive that people differ only in a few important aspects. In contrast, cognitively complex individuals are able to perceive differences in a more sophisticated manner, and to better integrate information, both positive and negative, into a coherent whole (Campbell, 1960; Bieri, 1968).

In the present study it was predicted that teachers high in authoritarianism (i.e. intolerate of ambiguity and cognitively simple) would more positively evaluate the in-group rather than the out-group. Specifically, because the teachers sampled were almost entirely middle class white females,

it was predicted that high authoritarian teachers would more positively evaluate girls than boys, and middle class than lower class students. Because of the prevailing positive stereotype of the out-group (i.e. Asians), it was predicted that low authoritarian teachers would more highly evaluate Asians relative to whites than would high authoritarian teachers.

Attributions for Student Performance. Cooper, Baron, and Lowe (1975) found that teachers were more likely to give internal attributions to performance by white middle class students than other ethnic or social class categories of students. In addition they found that middle class students were significantly more internal than lower class students. Specifically, white middle class students in the failure condition were seen as significantly more internal than other students, while a black middle class student was seen as less personally responsible for his failures, leaving his success expectation unchanged.

In the present study teachers were asked to make attributions of success or failure to both Asian and white students. It was expected that the positive Asian stereotype would cause teachers to view successful performances by Asians as being more internal than that of white, and that overall, middle class students should be more internal than lower class students.

Methods

Twenty-five white elementary school teachers participated in the experiment; twenty-three were female and two were male. Participants had an average of six years of teaching experience. After filling out a general information form participants filled out Budner's Scale of Tolerance-Intolerance of Ambiguity (STIA), which contains sixteen Likert-type items accompanied by seven-point scales ranging from strongly agree to strongly disagree. Answers were summed to yield an overall tolerance of ambiguity score, with

a higher score indicating a greater tolerance of ambiguous situations. Teachers also completed the Paragraph Completion Test (PCT; Schroder and Streufort, 1962), designed to measure a person's integrative complexity. Scoring was accomplished in accordance with Schroder's (1971) seven-point scale. The higher the PCT score the more integrative the teacher's thinking; the lower the score the greater the tendency to exhibit single-concept thinking.

After completing both the PCT and the STIA participants were given six student record cards containing information about fictitious stimulus students. Learning from past discoveries of Baron, Tom and Cooper (in press) the present study used authentic cumulative record cards along with color photos of each student, since it was found that stronger effects were evident when using realistic presentation modes.

Besides the usual background information concerning the student, father's and mother's occupation were also chosen and assigned, depending on the desired social class of the stimulus student, and according to ratings of job status provided by Hodge, Siegel, and Rossi (1966).

The race of the stimulus student was manipulated by the photographs and the ethnic origin of the student's and parent's names. Fictitious names were chosen for all stimulus students. Teachers were presented with the stimulus record cards one at a time, for a total of six record cards--two for middle class male and female white students, two for middle class Asian students of both sexes, and two for lower class white students of both sexes. The order of presentation of the cards varied from teacher to teacher.

Dependent Variables. Teachers were asked to estimate the students' projected grade for each record card, from 0 - 100%, in five different subject areas--Math, Reading, Composition, Art and Class Conduct. In addition, teachers recorded the occupation they thought the student was likely to

follow. These occupational responses were later categorized into four occupational groups--professional, technical, skilled, or unskilled. These categories were then transformed into continuous variables (from professional = 4 to unskilled = 1).

Teachers were also asked to estimate the reasons for each student's possible success or failure. These open-ended responses were then categorized and coded according to the attribution hierarchy utilized by Cooper and Burger (1980). These sixteen categories of causal explanations were subsequently synthesized into (a) Internal Stable; (b) Stable Effort; (c) Immediate Effort; (d) Teacher-Related; and (e) Other External attribution categories of explanations for a student's projected success or failure.

A factor analysis of the five subject areas revealed that all grades loaded on the principal component with loadings greater than .81; therefore the five subject-area grades were summed to form one overall measure of expected grade.

Five planned comparisons were conducted; (a) middle class vs. lower class students; (b) middle class whites vs. middle class Asians; (c) females vs. males; and the interactions of (d) race and gender and (e) social class and gender.

Groups of high and low authoritarian teachers were formed as follows: those teachers who scored above the median on both the STIA and the PCT were labelled low authoritarian teachers; those who scored below the median on both the STIA and the PCT were labelled high authoritarian teachers. Differentiation measures were analyzed using one-way ANOVAs with high vs. low authoritarian as the independent variables.

In addition, a measure of relationship was calculated for many of the effects. The effect size estimate used, the d-index (Cohen, 1977) describes

the difference between two means in terms of their common standard deviation. The statistic U_3 refers to the percentage of persons in the lower-meaned group surpassed by the average person in the higher-meaned group.

Results

Student Background. Table 1 presents the means for each stimulus student on both grade and occupational expectation measures, the overall ANOVA results, the weights for each planned comparison, and the F-value and p-level for each planned comparison.

The overall ANOVAs were significant for both grades ($F(1,120)=8.31$, $p<.0001$) and occupational expectations ($F(1,116)=13.37$, $p<.0001$). Planned comparisons for grades revealed that middle class students ($\underline{M}=85.5$) were expected to do better than lower class students ($\underline{M}=79.5$; $F(1,120)=29.08$, $p<.0001$). The d-index was .99, meaning the average middle class student was expected to get higher grades than 84% of the lower class students. In addition, middle class Asians tended to receive higher grades than middle class white students ($\underline{M}=84.5$; $F(1,120)=3.53$, $p<.07$; $d=.34$, $U_3=63\%$. Gender comparisons revealed girls ($\underline{M}=85$) received higher grade expectations than boys ($\underline{M}=82$; $F(1,120)=8.03$, $p<.01$; $d=.52$; $U_3=69\%$).

Table 2 demonstates that higher status occupations were expected of middle class ($\underline{M}=3.27$) than lower class students ($\underline{M}=1.8$; $F(1,116)=61.88$, $p<.0001$; $d=1.46$, $U_3=92\%$). The race by gender interaction further revealed that, specifically, white females were expected to attain higher status occupations than Asian females, whereas Asian males were expected to attain higher status occupations than white males.

Teacher Authoritarianism. Table 3 shows the mean differences between groups of students for teachers of low and high authoritarianism. The ANOVAs revealed only one significant difference: high authoritarian teachers favored

females over males (M=2.14) on the occupational expectations measure to a greater degree than low authoritarian teachers (M=-0.33; $F(1,116)=4.93$, $p<.05$; $d=1.34$, $U_3=91\%$). Though nonsignificant, all differentiation measures produced results in the desired direction; several comparisons demonstrated large effects of authoritarianism. For instance, on grade expectations the average low authoritarianism teacher favored Asians over whites to a greater degree than 78% of the high authoritarianism teachers (d=.79). In addition, the average high authoritarianism teacher favored middle class over lower class students to a greater degree than 80% of the low authoritarian teachers on grade expectations (d=.85) and than 77% of low authoritarians on occupational expectations (d=.76).

Cochran's test for related samples (Cochran, 1950) was utilized to analyze the attributional categories regarding projected student success or failure. It was found that teachers attributed external reasons more to Asians' failure than success ($Q=5.33$, $p<.05$), and that teachers attributed external causes for failure more to Asian females than Asian males ($Q=6.00$, $p<.02$). It was also revealed that other external factors such as Family and Outside Support was given more often by teachers as causes of success than failure among both Asian females ($Q=9.00$, $p<.01$), and Asian males ($Q=5.33$, $p<.05$).

Discussion

Student Background. Our findings demonstrate that, consistent with predictions, higher grades and occupational status were expected for middle class than lower class students, and higher grades for Asian than whites. In addition girls were expected to receive higher grades than boys. One unexpected interaction between gender and race was found on the occupation expectation measure: Asian males were expected to attain higher occupational

status than white boys while white girls were expected to attain higher occupational status than Asian girls.

Two explanations for this may be offered. First, teachers may feel that being both of a minority ethnic group and female may be difficult for Asian girls to overcome in the workplace. Or, teachers may believe that Asian cultural pressures for females to maintain a domestic role serves to stifle attempts to achieve higher status occupations outside the home. In any event, this reinforces Good and Finley's (in press) conclusion that the effect of gender on teacher expectancies involves a complex interaction with other background variables.

Teacher Authoritarianism. Our findings that high authoritarian teachers utilize student background to form lower expectations of out-group than in-group students complements other recent research demonstrating how teachers' individual differences influence their behavior toward students (see Babad, Inbar, and Rosenthal, 1982; Straussner, 1983). It appears that both high and low authoritarian teachers employ stereotypes, but that low authoritarian teachers showed a greater tendency than high authoritarians to predict higher grades for Asians relative to whites.

Teacher Attributions. Preliminary analysis of our findings indicate that teachers may believe that when Asians fail, it is due to circumstances beyond their control, such as task difficulty or complexity, or lack of clarity of directions or instructions. In addition, teachers seem to rate Asians more internal than whites as a whole. Teachers also attributed reasons for failure due to teacher-related causes more to Asian females than Asian males. It may be that teachers expect Asians males to be more internal than Asian females, who are seen as more influenced by tradition and familial pressures. And in fact, we found that family support and other students'

influence were seen more as reasons for success than failure among Asians than whites; that is, teachers may believe that when Asians succeed it is due to the support and even pressure to achieve given by the family and other students of the same ethnicity as that of the student, in addition to the internal pressure that Asians place upon themselves.

There is much reason to believe, therefore, that the positive stereotype of Asians contributes greatly both to expectations made for their academic performance as well as the underlying causes for their perceived performance. Future research should continue to explore these variables utilizing larger samples of teachers and different student groups.

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Table 1

Means and Planned Comparisons for Teacher Expectations Concerning Grades and Occupations

Means and Planned Comparisons \ Background of Student	Middle Class				Lower Class		Comparison Results		
	White		Asian		White		Grade or Occ.	F-value	p-level
	Female	Male	Female	Male	Female	Male			
Means for Grades	86	83	88	85	81	78	Grade	8.31	.0001
Means for Occupation	3.6	3.0	3.0	3.5	1.9	1.7	Occ	13.37	.0001
Social Class Comparison	+1	+1	+1	+1	-2	-2	Grade	29.08	.0001
							Occ	61.88	.0001
Race Comparison	+1	+1	-1	-1	0	0	Grade	3.53	.07
							Occ	<1	ns
Gender Comparison	+1	-1	+1	-1	+1	-1	Grade	8.03	.01
							Occ	<1	ns
Race x Gender Comparison	+1	-1	-1	+1	0	0	Grade	<1	ns
							Occ	6.59	.02
Social Class x Gender Comparison	+1	-1	0	0	-1	+1	Grade	<1	ns
							Occ	<1	ns

Table 2

Interaction of Gender and Race for Teacher Expectations

Concerning Occupation

Gender \ Race	White	Asians
Girls	3.63	3.00
Boys	3.04	3.52

Table 3

Differences Between Students as a Function of Teacher Authoritarianism

Student Differences \ Teacher Cognitive Style	Teachers who were: Low Authoritarians	High Authoritarians
For Grades:		
Females-Males	2.71	4.50
Whites-Asians	-4.43	-0.13
Middle-Lower Class	2.57	7.13
For Occupation:		
Females-Males	-0.33	2.14
Whites-Asians	-0.17	0.57
Middle-Lower Class	2.14	3.62

Note: Entries are mean differences found by subtracting the score of second group from score of first group. Weights for group scores were those used in planned comparisons.